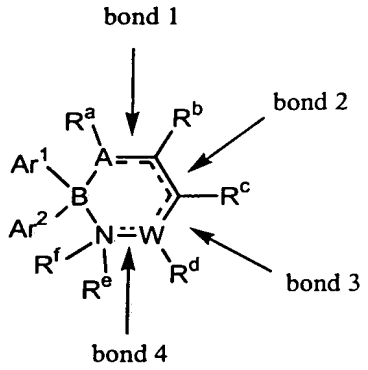
**What is claimed is**:

1. A method for preparing a compound of formula I:




(I)

wherein A is N, O or S;

W is $C_p$, where p is 0 or 1;

$R^a$, $R^b$, $R^c$, $R^d$, and $R^e$ are the same or different and are independently hydrogen, halogen, nitro, nitroso, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, or wherein $R^a$, $R^b$, $R^c$, $R^d$, and $R^e$ may be connected by aromatic, aliphatic, heteroaromatic, heteroaliphatic ring structures or substituted embodiments thereof, where $R^a$ is absent when A is O or S, and $R^d$ is absent when p = 0;

$R^f$ is hydrogen or is absent; and

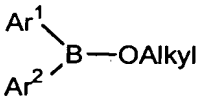
wherein $Ar^1$ and $Ar^2$ can be the same or different and are each independently thienyl, aryl or aryl substituted at one or a plurality of positions with

halogen, nitro, nitroso, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally heter. atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, and

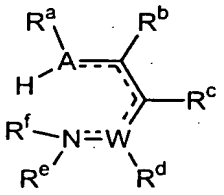
wherein bond 1, bond 2, bond 3 and bond 4 are independently a single bond or a double bond, provided that when A is S or O, bond 1 is a single bond and where A is N, bond 1 is a double bond,

said method comprising the step of:

reacting an alkyl diarylborinate of formula III with a compound of formula II to form the compound of formula I



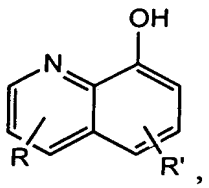

(III)

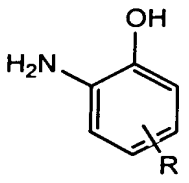


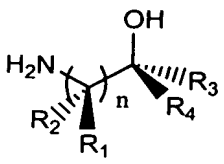

(II)

2. The method of claim 1 wherein the alkyl diarylborinate of formula III and the compound of formula II are in a ratio of about 1 to about 0.9 equivalents respectively.

3. The method of claim 1 wherein the compound of formula III is:



,


, or



wherein,

n is 1 or 2;

R and R' are the same or different and are independently hydrogen, halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, and

$R_1$, $R_2$, $R_3$, and $R_4$ are the same or different and are independently hydrogen, halogen, nitro, nitroso, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate, or $R_1$, $R_2$, $R_3$, and $R_4$ may be connected by aromatic, aliphatic, heteroaromatic, heteroaliphatic ring structures or substituted embodiments thereof.

4. The method of claim 1 wherein the alkyl diarylborinate of formula III is prepared by reacting a trialkylborate with a metalloorganic reagent.

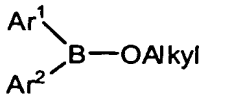
5. The method of claim 4 wherein the trialkylborate is trimethylborate, triethylborate, tributylborate, or mixtures thereof.

6. The method of claim 4 wherein the metalloorganic reagent is a Grignard reagent or a lithium reagent.

7. The method of claim 4 wherein the trialkylborate and the metalloorganic reagent are in a ratio of about 1 to about 2 equivalents respectively.

8. The method of claim 4 further comprising the step of treating the reaction product with methanol.

9. A method for preparing a compound of formula III:




(III)

wherein $Ar^1$ and $Ar^2$ can be the same or different and are each independently aryl or aryl substituted at one or a plurality of positions with halogen, nitro, nitroso, lower alkyl, aryl or substituted aryl, lower alkoxy, lower alkoxyalkyl, or cycloalkyl or cycloalkyl alkoxy, where each cycloalkyl group has from 3-7 members, where up to two of the cycloalkyl members are optionally hetero atoms selected from sulfur, oxygen and nitrogen, and where any member of the alkyl, aryl or cycloalkyl group is optionally substituted with halogen, lower alkyl or lower alkoxy, aryl or substituted aryl, halogen, nitro, nitroso, aldehyde, carboxylic acid, amide, ester, or sulfate,

said method comprising the step of reacting a trialkylborate with a metalloorganic reagent.

10
11. The method of claim 9 wherein the trialkylborate is trimethylborate, triethylborate, tributylborate, or mixtures thereof.

11
12. The method of claim 9 wherein the metalloorganic reagent is a Grignard reagent or a lithium reagent.

12
13. The method of claim 9 wherein the trialkylborate and the metalloorganic reagent are in a ratio of about 1 to about 2 equivalents respectively.

13
14. The method of claim 9 further comprising the step of treating the reaction product with methanol.

14
15. A compound of the formula I prepared by the method of claim 1.

15
16. A compound of the formula III prepared by the method of claim 9.

16
17. A compound according to claim 15 that is:

Di-(*p*-chlorophenyl)borinic acid 5-nitro-8-hydroxyquinoline ester,

Di-(*m*-chlorophenyl)borinic acid 8-hydroxyquinoline ester,

Di-(*p*-chlorophenyl)borinic acid glycine ester,

Di-(*p*-chlorophenyl)borinic acid (L)-proline ester,

Di-(*p*-chlorophenyl)borinic acid N-hydroxyethyl cytosine ester,

Di-(*p*-chlorophenyl)borinic acid N-hydroxyethyl 5-fluorocytosine ester,

di-(p-fluorophenyl)borinic acid 8- hydroxyquinoline ester,

di-(p-chlorophenyl)borinic acid 8-hydroxyquinoline ester,

diphenylborinic acid 8-hydroxyquinoline ester,

di-(p-fluorophenyl)borinic acid ethanolamine ester,

di-(p-chlorophenyl)borinic acid ethanolamine ester,

6-N-(diphenylborinic ester)-ethyl-adenine,

6-N-(diphenylborinic ester)-ethyl-9-(2-(4-morpholinyl)-ethyl)-adenine,

6-N-(diphenylborinic ester)-ethyl-9-(3-(N-phthaloyl)-aminopropyl)-adenine,

6-N-(diphenylborinic ester)-ethyl-9-(2-(2-(2-hydroxyethoxy)ethoxy)-ethyl)-adenine,

6-N-(diphenylborinic ester)-ethyl-9-(ethyl-2-acrylate)-methyl-adenine,

Di-(4-chloro-2-fluorophenyl)borinic acid 8-hydroxyquinoline ester,

Di-(3,4-methylenedioxyphenyl)borinic acid 8-hydroxyquinoline ester,

Di-(4-methoxyphenyl)borinic acid 8-hydroxyquinoline ester,

Di-(2-thienyl)borinic acid 8-hydroxyquinoline ester,

Di-(p-fluorophenyl)borinic acid 8-hydroxyquinaldine ester,

Di-(p-chlorophenyl)borinic acid 8-hydroxyquinaldine ester,

Di-(4-methoxyphenyl)borinic acid 8-hydroxyquinaldine ester,

Di-(p-fluorophenyl)borinic acid 5-chloro-8-hydroxyquinoline ester,

Di-(p-chlorophenyl)borinic acid 5-chloro-8-hydroxyquinoline ester,

Di-(3,4-methylenedioxyphenyl)borinic acid 5-chloro-8-hydroxyquinoline ester,

Di-(4-methoxyphenyl)borinic acid 5-chloro-8-hydroxyquinoline ester,

Di-(3,4-methylenedioxyphenyl)borinic acid 8-hydroxy-5-nitroquinoline

ester,

Diphenylborinic acid 2-aminophenol,

Diphenylborinic acid pyridine-2-methanol,

Diphenylborinic acid 2-amino-1-phenylpropanol,

Diphenylborinic acid (S)-(+)-pyrrolidine-2-methanol,

Di-(4-fluorophenyl)borinic acid ethanolamine ester,

Di-(4-chlorophenyl)borinic acid ethanolamine ester.

6-N-(diphenylborinic ester)-ethyl-9-(2-hydroxymethyl-5-methyl-tetrahydro-furan-3,4-diol)-adenine,

6-amino-4(2-diphenylborinic ester) ethylamino pyrimidine, or

4-amino-5(2-diphenylborinic ester ethyliminoester)imidazole.